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ABSTRACTS

NOTE: Periodical articles and patents covered in "Textile Technology Digest" are abstracted elsewhere, but not all in the same publication. These abstracts are not intended to compete with any other source, but to supplement other sources for two specific purposes:

1. To bring together the pertinent references in a form adapted to rapid scanning, abstracts being selected and written to meet the interests (broadly interpreted) of member mills.

2. To present the information concisely, in sufficient detail to provide a survey of progress in any branch of the industry or to help readers decide whether they need to consult the original reference.

No attempt is made to include operating details or other information needed for following up a new development. Tailoring the abstracts to fit the needs of cotton textile technologists is the primary purpose. The layout and arrangement are intended for easy reading, rapid scanning and ready finding of pertinent items. Abstracts may be clipped for mounting on index cards (an extra copy for this purpose will be supplied on request), or whole issues may be filed in a standard 3-ring binder.

BLEACHING

FABRIC DETERIORATION. Arthur I. Anderson. *Rayon Textile Monthly 25*, 576-7 (1944). Chlorine retention after bleaching or other processes involving the use of chlorine or its compounds may be the cause of serious damage to the fabric. Some of the resins now used in treating fabrics tend to retain the chlorine and thus promote deterioration. Use of chlorine retentive finishes should be avoided on rayon goods. ——.

CELLULOSE DERIVATIVES

CELLULOSIC SHEETING. T. S. Lawton, Jr., T. S. Carswell and H. K. Nason, Monsanto Chem. Co. *Modern Plastics 1944*, 43-50, 57 (Oct.) Effects of temperature, relative humidity, moisture content, thickness and rate of testing have been measured by tensile and compressive strength tests on cellulose acetate and nitrocellulose. Results are presented in numerical tables and in curve charts.

CELLULOSE ESTERS. Carl J. Malm (to Eastman Kodak Co.). USP 2 362 575-6, Nov. 14. In a dope esterification process cellulose is esterified with acetic acid and anhydride, with or without not over 10% of propionic or butyric anhydride at a relatively low initial temperature in presence of sulfuric acid and without external cooling; or with acetic acid containing sufficient propionic or butyric anhydride (added at not over 0°F.) for complete acylation.

MOISTUREPROOFING CELLULOSE. Frank D. Bergstein. USP 2 363 289, Nov. 21. Cellulose foils are moistureproofed by applying a molten composition of 65-75% wax and 25-35% hydrocarbon polymer (such as polyisobutylene), this mix being blended with 5-10% of cyclized rubber. The coating is thick enough to form a strong heat-sealed bond.

CELLULOSIC COATING. Milton D. Swartz and Kinloch N. Yellott (to Farboil Paint Co., Inc.). USP 2 361 435, Oct. 31. Wires and other articles having an insulating coating of pitch are given an adherent cellulosic coating by depositing a solution of a cellulose derivative in an organic solvent at such a rate (linear speed 200-1000 ft. per minute) that the solvent evaporates before it softens the pitch coating.

CELLULOSE ESTERS. Robert D. Rowley (to Celanese Corp. of Am.). USP 2 361 500, Oct. 31. Organic esters of cellulose are stabilized by ripening in successive stages, the last stage being effected in presence of a polycarboxylic acid.

ETHYLCELLULOSE COATING. John K. Speicher (to Hercules Powder Co.). USP 2 362 166, Nov. 7. Ethylcellulose coatings are applied by a melt spray method in which plasticized ethylcellulose particles are projected through a flame onto the surface to be coated.

CELLULOSE ACETATE SOLUTION. Wm. O. Baker (to Bell Telephone Laboratories, Inc.). USP 2 362 182, Nov. 7. Cellulose triacetate is dissolved in acetone, methlethyl ketone or an alkyl (ethyl or propyl) acetate or formate by swelling the cellulose triacetate in the solvent at about -75°C and raising the temperature until a solution is produced.

FILM. Gale F. Nadeau and Clemens B. Starck (to Eastman Kodak Co.). USP 2 362 580, Nov. 14. A laminated film is composed of nitrocellulose on a cellulose acetate or like base, the nitrocellulose layer being faced with a layer of nitrocellulose and modified polyvinyl alcohol and then with polyvinyl alcohol.

CELLULOSE ETHER. Robert C. Medl. Jr. (to Herculese Powder Co.). USP 2 362 761, Nov. 14. A coating composition is composed of a water-soluble cellulose ether and its own weight or less of a flexibilizing agent which is a complex ester of a polyhydric alcohol and an inorganic polybasic acid.

CELLULOSE ETHERS. Walter H. Groombridge and John Downing. USP 2 362 900, Nov. 14. Cellulose is treated with an excess of aqueous alkali and water is removed from the alkali cellulose by azeotropic distillation with an inert liquid after which the alkali cellulose is esterified.

CARTOON CELL. Joseph A. Ball (to Walt Disney Productions). USP 2 362 980, Nov. 21. A cartoon cell includes a transparent sheet of matt surface cellulose acetate covered with a layer of ethylcellulose containing a resin of a higher index of refraction so that the index is raised approximately to that of cellulose acetate.

CELLULOSE ESTERS. George W. Seymour and Blanche B. White (to Celanese Corp. of Am.). USP 2 363 091, Nov. 21. Cellulose acetate-formate

is prepared by esterifying cellulose with formic-acetic anhydride (prepared from formic acid and acetic anhydride) in presence of H_2SO_4 as esterification catalyst.

CELLULOSE ETHERS. Henry Dreyfus. Can. P. 423 485, Oct. 31. Cellulose ethers are made by impregnating cellulose with NaOH in ethyl alcohol (95% or stronger), then immersing the alkali cellulose in toluene or other liquid capable of forming azeotropic mixtures, removing the alcohol by azeotropic distillation and esterifying the alkali cellulose.

GREASEPROOF PAPER. Richard D. Freeman, Floyd C. Peterson and George K. Greminger (to Dow Chem. Co.). Can. P. 423 529, Oct. 31. Paper is coated on one or both faces with an aqueous solution of aluminum cellulose glycollate and ammonia, then dried to impart grease resistance.

PROJECTION SCREEN. Ernest Schweizer (to Camille Dreyfus). Can. P. 423 584, Oct. 31. A screen is made by coating a cellulose acetate base sheet on one side with a cellulose derivative containing aluminum hydroxide and on the other side with a plasticized cellulose derivative lacquer imparting a matt finish.

CELLULOSE DERIVATIVES. Henry Dreyfus. Can. P. 423 605, Nov. 7. Cellulose derivatives which contain sulphur are formed by the action of a bisulphite on a cellulose ester of an unsaturated acid or a cellulose ether of an unsaturated alcohol.

ALKALI CELLULOSE. Arthur J. Barry (to Dow Chem. Co.). Can. P. 423 655, Nov. 7. Water is extracted from alkali cellulose with liquid ammonia at a temperature between -80 and 25°C.

CELLULOSE DERIVATIVES. Henry Dreyfus. Can. P. 423 720, Nov. 14. Cellulose acetate products are treated with hexamethylene dicyanamide and then heated to 100-120°C.

COATED FABRICS

COATED FABRIC. Josef Grabec. USP 2 361 682, Oct. 31 (vested in the Alien Property Custodian). A design forming intersecting ribs with tapered apertures between them is pressed into a rubber coated fabric and the rubber of the fabric is then vulcanized.

COATING HOSE. Duncan E. F. Canney and Mark Balkin (to Sillick Holding Co., Ltd.). USP 2 362 881, Nov. 14. Apparatus for applying a uniform coating to a normally flattened textile hose includes a plug for expanding the hose to circular form and to apply a steaming agent to the inside of the hose.

DYEING

DYEING PROCESSES. Anon. *Rayon Textile Monthly 25,* 566 (1944). The pad-steam process for rapid reduction of vat dyes on the fabric gives adequate chemical stability of the leuco derivatives. The multi-lap equipment for operating the soda ash development process makes it possible to dye with vat dyes in a mild alkaline solution. The equipment is suitable for continuous vat dyeing of short or long lengths of cloth and apparently also for direct and acid colors on union goods, acid and chrome dyes on wool, and for continuous bleaching or preparation of fabrics prior to dyeing.

DYEING PILE FABRICS. Anon. *Rayon Textile Monthly 25,* 515-6, 568-9 (1944). Instructions are given for applying direct dyes in the jig, topping with basic dyes, and application of vat dyes to cotton pile fabric. Scouring procedures are also described.

DIRECT DYES. George Broun. *Textile Bulletin 67,* No. 4. 39-40 (1944). Procedures are described for direct dyeing of light to medium shades, heavy shades, gray goods on the continuous range, and goods to be given a waterproofing acid treatment. The dyer can work out formulas which will feed uniformly and give consistent results without too much shading. The enclosed dyebeck for rayons is more important for knit goods than for rayon and rayon blends.

DYEING FIBERGLAS. William H. Page, Bureau of Industrial Service, Inc. *Rayon Textile Monthly 25,* 565 (1944). Pigment colors can be successfully applied to Fiberglas fabrics from water-in-oil emulsion. With the aid of this new development Fiberglas fabrics can be printed on conventional equipment.

ACID DYES ON WOOL. Arthur N. Patterson, S. Stroock & Co., Inc. *Rayon Textile Monthly 25,* 511-2, 567 (1944). The affinities of cashmere noil, vicuna, rabbit fur, mohair and bleached muskrat fur for acid dyes are compared with the affinity of wool for the same dyes. There are numerous useful blends of wool with these other animal fibers. Wool-mohair blends are especially well recognized although mohair does not have the felting property of wool.

VAT DYEING. R. S. Stribling, Philadelphia QM Depot. *Rayon Textile Monthly 25,* 569-70 (1944). A review of recent advances, including the pad-steam process.

TENDERING. Technicus. *Textile Colorist 66,* 338-41 (1944). To prevent tendering by sulfur blacks or aniline blacks the cloth must be well scoured, carefully bleached, mercerized if possible, and dyed in presence of a penetrating agent.

PRINTING PASTE. Norman S. Cassel (to Interchemical Corp.). USP 2 361 454, Oct. 31. A printing paste for textiles comprises an emulsion in which the continuous phase is a solution of a film-forming substance in a water-immiscible solvent and the dispersed phase is an aqueous dispersion of a dye and a thickener which is about equal in quantity to the amount of film former.

DYEING SYNTHETIC FIBERS. Karl Heymann (to Am. Viscose Corp.). USP 2 362 375-6-7, Nov. 7. Vinyl polymers, yarns or filaments are dyed from an aqueous dye bath containing a dispersed dye and an organic compound which may be a dichloroaniline and aminodiphenyl or a napthylamine (phenylated or not); or an aromatic ester in which the aromatic components may be in the acid or hydroxy component or both; or an aromatic ether in which one or both radicals may be aromatic.

EDUCATION

TEACHING TEXTILE CHEMISTRY. Albert H. Grimshaw, North Carolina State College. *Rayon Textile Monthly 25,* 551-2 (1944). An example of the changes to be made in textile school curriculums to keep abreast with textile progress is the course in synthetic textiles now being planned by the School of Textiles at North Carolina State College.

FABRICS

BALE COVERS. Anon. *Cotton (Manchester) 50,* No. 2430, 5 (1944). Advantages of cotton fabric over hessian for bale covers include better preservation of the grade of cotton, compact appearance of the bale, less clinging of raw cotton to the cover, smaller tare, freedom from contamination with jute fibers and resalability of the bale covers.

MOMIE CLOTH. P. G. Alexander. *Rayon Textile Monthly 25,* 562 (1944). Momie cloth is a design said to have originated in Italy. An analysis and diagrams of the 66-end, 40-pick momie cloth are presented.

SPUN RAYON FABRICS. Irving Teplitz, Governor Fabrics Corp. *Rayon Textile Monthly 25,* 553-4 (1944). Spun rayon is being successfully used in fabrics to take the place of tropical worsted, challis, whipcord, cavalry twill, serge, flannel, wooly crepe, doeskin and several other fabrics. Some of the fabrics use Aralac as filler. Resin finishes are used effectively but can be overdone if not applied with skill and care.

SYNTHETIC FABRIC. Alden W. Hanson (to Dow Chem. Co.). USP 2 361 371, Oct. 31. A fabric made of normally crystalline polyvinylidene chloride filaments in which the orientation is along the filament axis is exposed to a hot fluid within 50°C of the softening point and pressed until the thickness of the fabric is lessened by 25-40%.

PILE FIBER. William S. Nutter. USP 2 362 299, Nov. 7. An upholstery pile fabric with mohair V-pile tufts has a repeat along the width of the fabric comprising a single row of V-pile tufts followed by 2 relatively large and 2 relatively small ground warps, the large ground warp serving to stabilize the fibers and support the tuft rows.

PILE FIBERS. Wm. H. King (to Behr-Manning Corp.). Can P. 423 510, Oct. 31. Pile fibers are applied to a continuously moving adhesive-coated foundation sheet by applying the fibers first to a moving apron coated with a weaker adhesive serving merely to hold the fibers in position until they make contact with the stronger adhesive on the foundation sheet.

ADHESIVE TAPE. Raymond E. Reed (to Kendall Co.). Can. P. 423 541, Oct. 31. An unwoven fibrous web containing sufficient cellulose acetate fiber to serve as bonding agent is formed into tape and coated with an adhesive in which the plasticizer is the same as in the cellulose acetate fibers.

STABILIZED TEXTILES. James A. Clark (to Sylvania Ind. Corp.). Can. P. 423 563, Oct. 31. A preshrunk textile formed of artificial hydrophilic fibers is dimensionally stabilized in its preshunk state by treatment with an alkaline dispersion of an alkali-soluble water-insoluble cellulose ether and coagulating the cellulose ether on the textile.

PILE FABRIC. John J. Repp (to Collins & Aikman Corp.). Can P. 423 801, Nov. 14. A cut pile fabric has a design area in which the pile tufts have inclined legs and a plain area in which pile tufts have vertical legs, with a backing fabric which is regular and uniform and consists of a set of tight warps, a set of oppositely woven slack warps and a set of weft threads some of which are over all of the tight warps while others are under all of the tight warps.

BELTING. Wilfrid Lord and Sidney A. Brazier (to Dunlop Tire and Rubber Goods Co., Ltd.). Can. P. 423 811, Nov. 14. Fabric for belting has high strength warp threads and weftwise tubular constructions designed to accommodate belt fasteners at the end of the belt.

KNIT FABRICS. Richard B. Sitzler (to Camille Dreyfus). Can. P. 423 856, Nov. 14. Staple fiber is prepared from continuous filament rayon in which the denier per filament is approximately 1.5, and this yarn is used in making knit goods.

FIBERS

JARILA. Anon. *Cotton (Manchester) 50,* No. 2422, 6 (1944). Jarila cotton, first entered in the list of standard Indian cottons in 1940-41, has decreased about 9% in staple length since 1940. This cotton gives about 7% waste in the flow room and about 7% loss in the card. It usually gives few breakages up to counts in the 30's but during the last season spindle speed had to be reduced in the 24's and 30's to keep down the number of breakages.

LONG STAPLE COTTON. Anon. *Cotton (Manchester) 50,* No. 2427, 5 (1944). Comparative tests on 2 Egyptian cottons and 3 Sea Island varieties are believed to be the first to show Egyptian cotton to be stronger than Sea Island

cotton. These tests demonstrate that staple length is not the only factor in yarn strength, since the longer staple Sea Island cottons were heavier and coarser than the Egyptian cottons and their strength was much lower. The new Amon cotton has unusual importance partly because of its high resistance to wilt and its high yield (nearly equal to that of Giza 7).

Chemistry of Cellulose. Emil F. F. Heuser. John Wiley & Sons, New York City, 1944; 660 pp.; price $7.50.
Reviewed in *Science 100,* 472-3 (1944).

FIBERS, ARTIFICIAL

PLASTIC FIBERS. Anon. *Rayon Textile Monthly 26,* 544 (1944). Extruded vinylidene chloride fiber is flexible, resilient and highly resistant to stains, alkalies and acids. It has numerous potential uses, e. g. in upholstery for automobiles, railway car seats, theater seats and the like, and in plastic window screens. Its development is expected to release other textiles, and even rubber and leather, for direct war uses.

PROPERTIES OF NYLON. Walter J. Hamburger, Fabrics Research, Inc. *Rayon Textile Monthly 25,* 561 (1944). Wet finishing has certain effects on the physical properties of nylon which can be utilized to increase durability by as much as 50%; resistance to compression can be increased and recovery after stretch can be improved. Nylon has a tenacious memory for previous treatment, which must be taken into account in wet finishing.

LONG STAPLE FIBERS. Bill McComb. *Rayon Textile Monthly 25,* 574-6 (1944). In making a roving of long staple fibers it is best to run with as little twist as possible. The drafting assembly must be changed in passing from short to long staple fibers. In particular, long staple synthetic fibers, having a high coefficient of friction, must be run with sufficient weight on the rolls to hold the fibers as the drafting pressure builds up. Cleanliness around the roving frame is vitally important and particular attention must be given to avoiding accumulation of even small charges of static electricity.

SYNTHETIC FIBERS. H. Wickliffe Rose. Am. Viscose Corp. *Rayon Textile Monthly 25,* 555-6 (1944). Rayon tire cord, nylon parachutes, glider tow lines and mountain climbing rope are among the military products in which synthetic fibers have been used to excellent effect. There is a prospect of mildewproof rayon and there are numerous potential uses for synthetic fibers in the insulation field.

FILAMENTS. Otto Roelin. USP 2 361 709, Oct. 31 (vested in the Alien Property Custodian). Threads or filaments are formed from a solid-liquid paste by extrusion through orifices in the bottom of a cylindrical container having a device above the botton for kneading the mixture into a pasty consistency before extrusion.

PROTEIN FIBERS. Oswald C. H. Sturken (50% each to Harriet Sturken and Sidney L. Reich). USP 2 361 713, Oct. 31. Zein is extruded through orifices into a bath of formaldehyde and kieselguhr.

NYLON. Guy B. Taylor (to E. I. du Pont de Nemours & Co.). USP 2 361 717, Oct. 31. Polyamides are formed in an aqueous system under conditions which prevent steam formation, then under conditions which permit steam formation, and finally the molten polymer is extruded as a filament or ribbon.

SPINNERET. Harry J. Jones (to Baker & Co., Inc.). USP 2 362 277, Nov. 7. A spinneret for making filaments from synthetic fiber-forming polymers is made of Ni-free stainless steel containing 14-20% Cr.

THREAD. Sterling W. Alderfer (½ to Edward D. Andrews). USP 2 363 457, Nov. 21. A polyvinyl alcohol tape is converted into thread by treatment in a steam bath to render the surface tacky without swelling the tape, followed by heating, stretching and rolling the tape so that it forms a thread.

SLIVER. George M. Lannan and Frank Vanucci (to Owens-Corning Fiberglas Corp.). USP 2 363 470, Nov. 21. Glass fibers are formed into a sliver by supplying the fibers in haphazard arrangement to a ribbon-like web which is continuously advanced and set against the force holding the fibers in their haphazard arrangement so that a sliver is formed and folded along its length as it advances.

FIBERS, RAYON

VISCOSE PRODUCT. Paul H. Schlosser and Kenneth R. Gray (to Rayonier Inc.). USP 2 362 217, Nov. 7. In making regenerated cellulose by the viscose process a polypropylene oxide is added before completing the shredding of the alkali cellulose.

SPINNING SOLUTION. Lynwill K. Spangler and Harold C. Pratt (to Am. Viscose Co.). USP 2 362 674, Nov. 14. Apparatus for handling spinning solutions includes a main header connected to several supply tanks, and valve controlled connections for pumping the solution through the 2 headers.

ARTIFICIAL FIBERS. Max-Otto Schürmann and Johann D. Holtz. USP 2 363 019, Nov. 21 (vested in the Alien Property Custodian). Artificial horsehair is made from regenerated cellulose by incorporating in the filament the components of a urea-formaldehyde resin; the fibers are formed into a strongly twisted rope and the resin is hardened while the rope is twisted, after which the fibers are cut to staple length.

SPINNERET. Harold Whitehead (to Baker and Co.). Can. P. 423 509, Oct. 31. A spinneret for forming rayon filaments from viscose solutions is made of Pt 90-95, Rh 3-7.5 and Ru 2-5%.

ELASTIC FILAMENTS. John M. Leach (to Sylvania Ind. Corp.). Can. P. 423 564, Oct 31. Elastic filaments are fed first through a pair of variable speed feed rolls, then through a pair of even speed feed rolls, the first roll speed being governed by the length of the loop between the pairs of rolls.

KNITTING

KNITTING MACHINE. Rudolph Bassist (10% to Harold H. Stern, 22.5% to Edith Abrams and 22.5% to Edith April). USP 2 361 526 Oct. 31. A warp knitting machine is adapted to production of patterns by a mechanism which imposes a regular fluctuating motion, while a pattern control device driven by the cam shaft imposes a supplemental fluctuating component of motion, on the warp beam.

STOP MOTION. William C. Lee (to Hemphill Co.). USP 2 361 779, Oct. 31. A stop motion for a circular knitting machine is adapted for simultaneous movement of the stop motion to and from a position to be engaged by a warp thread control as the warp thread feed moves to and from its feeding position.

KNIT FABRIC. Edwin Wildt, Henry H. Holmes and John C. H. Hurd (to Wildt and Co., Ltd.). USP 2 362 041, Nov. 7. A knitting machine adapted to produce fancy effects has a thread guide and transfer device for each needle employed in producing the fancy effect, and a feed design which causes the needles to draw a loop of the yarn.

TENSIONING DEVICE. Alfred Hofmann and Walter Hartmann (to Alfred Hofmann, Inc.). USP 2 362 485, Nov. 14. In tensioning a fabric on a knitting machine the welt bar is withdrawn with a continuous yieldable force in a motion with both downward and horizontal components during the knitting of a substantial length of fabric.

STOP MOTION. Nathan J. Tellerman (to Stop-Motion Devices Corp.). USP 2 362 781, Nov. 14. A stop motion device for knitting machines includes a passage having a restriction which serves both to sweep off loose slubs and lumps and to hold knots or tight lumps so that the thread or yarn will break and stop the machine.

LUMP DETECTOR. Edward Vossen (to Stop-Motion Devices Corp.). USP 2 362 783, Nov. 14. A press-off and lump detector for each thread feed on a knitting machine has a movable detector finger riding on the top edge of the fabric where the cylinder and dial needles are fully retracted, and a switch for the electric circuit of the machine controller, operating when the motion of the floating finger exceeds a predetermined amount.

FORMING WELT. Alfred Hofmann and Friedrich M. Wachtler (to Alfred Hofmann Inc.). USP 2 363 000, Nov. 21. Welts are formed in a flat knitting machine by means of a device which enables each knitting section to sidestep the welt bar during a loop receiving stage of welt formation for adjusting the welt hooks into exact midspace position between the needle planes and, conversely, sidestep the welt bar during a loop delivering stage to adjust the welt hooks exactly into the planes of the needles.

KNITTING. Fritz Lambach (to Robert Reiner, Inc.). USP 2 363 008, Nov. 21. In knitting fabric onto prefabricated fabric blanks on a flat knitting machine a driving connection is provided between the machine and a feed device for introducing the fabric blank in timed relation with the operation of the machine.

KNITTING FRAME. William Welker. USP 2 363 032, Nov. 21 (vested in the Alien Property Custodian). A flat knitting frame has a welt forming device in which an upright welt bar with hooks engages the needle loop of every second bar needle in the initial course of the fabric.

KNITTING MACHINE. Max C. Miller. Can. P. 423 496, Oct. 31. A loop lifting device for full-fashioned knitting machines has a needle-receiving groove and a hook-shaped yarn-retaining notch in the grooved side.

LAMINATES

GLASS FIBER LAMINATES. Anon. *Rayon Textile Monthly 25,* 544 (1944). A laminated material made with Fiberglas and a plastic binder is being used for the cabin structures of the new R-6 helicopter, as support for bullet-sealing gasoline tanks in combat planes and in other war products. This development will probably open the way for many postwar uses.

LAMINATED SHEETS. Frank E. Donovan (to Specialty Converters, Inc.). USP 2 361 751, Oct. 31. A laminated fibrous sheet with high carrying strength in all directions is formed by applying an adhesive to one or both adjacent surfaces of 2 fibrous sheets, interposing between them a loose fluffy mat of stiff, tangled, short waste sisal fibers and bonding the 2 sheets together under pressure.

MACHINES

NEW EQUIPMENT. Anon. *Rayon Textile Monthly 25,* 584-5 (1944). Illustrated descriptions of a synthetic yarn shuttle, a dimensional change tester, a porosity meter, a non-collapsible air duct, a puncture tester, a heat circulating fan and a steam mixer water heater.

STOP MOTION. Albert E. Winslow (to Atwood Machine Co.). USP 2 361 905, Oct. 31. A strand handling machine has 2 package supports below the spindle; one carries a circular contact strip and the other a contact brush for electrically actuating the stop motion device.

SLICING YARN. Clement J. Charnock. USP 2 362 801, Nov. 14. A yarn slicing machine

has slotted spindles supported for rotation around a common axis, a support for the thread sections to be twisted together and a device for revolving the spindles simultaneously, first in one direction and then in the opposite direction.

STOP DEVICE. Lawrence W. Griffs (to Van Raalte Co., Inc.). USP 2 362 956, Nov. 14. A device for stopping a textile machine as a result of thread failure includes a capillary which is kept continuously wet with an electrically conducting liquid in such a way that a displaced thread is wet by the liquid and conducts the current to a second terminal to close the machine-stopping circuit.

TIE BAND. Henry G. Drake and James L. Wingate. USP 2 363 404, Nov. 21. A machine for making double loop, hook and tie bands has an elongated table carrying a trackway having spaced apertures, and 3 shafts parallel to the table top, terminating in hooks to receive strands of material.

TENSIONING DEVICE. Fred Wholton (to Courtaulds Ltd.). Can. P. 423 645-6. Nov. 7. A thread tensioning device has 2 fixed guides between which is a friction surface, and a movable guide mounted on a rotating carrier.

YARN CONE HOLDER. William H. Miller to Freeland Spool and Bobbin Corp.). Can. P. 423 533, Oct. 31. A pinboard for holding tubes or cones of yarn has a locking device for the arbor which holds the tubes or cones, and a release for the locking device.

YARN FEED. Dwight B. Allen to Ellen B. Allen, Can. P. 423, 854, Nov. 14. In a yarn feed device the yarn passes through a clamp which alternately grips and releases the yarn, with 2 loop-forming devices, one before the clamp and one after it.

MACHINES, WINDING

YARN WINDER. Lynn K. Spangler and Charles E. Schrader (to Am. Viscose Corp.). USP 2 361 426, Oct. 31. A winding machine is arranged so that the spindle and the traverse mechanism can be swung with respect to each other around an axis parallel to that of the spinble, and a movable impact member which actuates an automatic stop mechanism when a predetermined size of package is reached.

YARN WINDER. Furman G. Carroll (to Am. Viscose Corp.) USP 2 361 427, Oct. 31. The automatic stop mechanism of a yarn winder has a pivoted pendant one end of which is engaged by a part of traverse mechanism at a predetermined package size so that the other end moves a swinging arm to actuate the stop device.

YARN WINDER. Garfield L. Boyce and Carl A. Castellan (to Am. Viscose Corp). USP 2 361 428, Oct. 31. The automatic stop device of a yarn winder is actuated by a pivoted member set in a position of rest from which it can be displaced to fall by gravity when the yarn package reaches a predetermined size, thereby actuating the stop mechanism.

YARN WINDER. William Shontz (to Am. Viscose Corp.). USP 2 361 429, Oct. 31. A yarn winder carries an element which is constantly driven while the machine is in motion but which at a predetermined size of yarn package engages a stop member which comes into the path of the driven member.

YARN WINDER. Henry J. McDermott (to Am. Viscose Corp.). USP 2 361 430, Oct. 31. A yarn winder has a movable guide controlled by the yarn member so that it directs the yarn to the spindle through a yarn-storing loop and actuates the automatic stop mechanism when the yarn tension rises to a predetermined value.

YARN WINDER. William C. Hanse (to Am. Viscose Corp.). USP 2 361 431, Oct. 31. The automatic stop device of a yarn winder is controlled by a counterweighted pivoted member which governs the pressure of the traverse mechanism against the yarn package and actuates the stop device at a predetermined package size.

BOBBIN WINDER. Gustaf S. Beckman (Universal Winding Co.). USP 2 361 813, Oct. 31. An automatic winding machine has a belting device and a device for attaching the yarn trailing from the doffed bobbin to the new bobbin by means of a yarn track.

WINDER. Edward J. Abbott and Winthrop L. Perry (Abbott Machine Co.). USP 2 362 455, Nov. 14. A winding machine having several winding units, with its own thread traversing device, and a moving abutment which progressively shifts the zone of traverse from the base to the tip of the package.

YARN WINDER. William T. Stearn and Frank W. Schulte (to Celanese Corp. of Am.). USP 2 362 506, Nov. 14. The traverse frame of a yarn winder carries a yarn guide plate and a couterweight between which there is an elastic connection so that the pressure of the yarn guide on the yarn package is diminished as the package fills up.

YARN WINDER. Charles D. Reynolds and Herman A. Moe (to Universal Winding Co.). Can. P. 423 849, Nov. 14. A yarn winding machine has an electro-magnetically operated automatic doffer.

YARN WINDER. Charles H. Jones (to Universal Winding Co.). Can. P. 423 850, Nov. 14. The traverse frame of a yarn winder is pivoted so that it can swing toward and away from the

winding spindle, and a sliding thread guide on the traverse frame bears against the yarn package wound on the spindle.

YARN WINDER. Harold W. Hitchcock (to Universal Winding Co.). Can. P. 423 851, Nov. 14. An automatic stop device on a yarn winding machine stops the rotation of the yarn carrier at a predetermined diameter.

MERCERIZING

MERCERIZING. Alfred Rheiner and Kurt Hofer (to Sandoz Ltd.). Can. P. 423 554, Oct. 31. The wetting-out power of mercerizing liquor is increased by adding a small proportion of ethylbutoxy-ethoxyacetic or a like acid.

MERCERIZING. Arthur de Castro (to Nat'l Oil Products Co.). Can. P. 423 828. Nov. 14. A penetrating agent for mercerizing baths comprises 90-97% of a lower phenol and 3-10% of a dialkyl phenol in which the alkyl groups may be butyl, amyl or hexyl.

PEST CONTROL

FUNGICIDE. Elbert C. Ladd (to U. S. Rubber Co.). USP 2 362 563-4-5, Nov. 14. Fungicides contain as an active ingredient a dichloro-, pentachloro- or hexachloro derivative of 2-cyclohexenedione-1,4.

FUNGICIDE. William P. ter Horst (to U. S. Rubber Co.). USP 2 362 594, Nov. 14. An essential active ingredient in a fungicide is a pentachloro-4-methyl-2, 4-cyclohexadienone.

PROCESSING

RAYON STAPLE FIBER. Fletcher S. Culpepper, Am. Viscose Corp. *Rayon Textile Monthly 25,* 571-3 (1944). In processing rayon staple on the cotton system of machinery correlation of fineness with length is desirable and the moisture regain of viscose staple fiber must be given due consideration. No difficulty is encountered on the picker if the rayon staple has been thoroughly conditioned. Severe beating by blade beaters is not necessary. The Kirschner beater operated at a relatively low speed is sufficient. Leather, cork and synthetic composition rolls all have particular uses for certain varieties of rayon staple. Wide front rolls are beneficial in improving the spinning process.

PROCESSING RAYON. E. H. Dreher. *Textile Bulletin 67,* No. 4, 24, 26, 46-7 (1944). Several types of viscose and acetate rayons are specially designed for working on the cotton system. The opening process need not be as severe as for cotton. It is helpful to blend from as many bales as possible to compensate for variations in moisture content. Carding conditions are rather similar to those encountered with cotton, but licker-in speeds may be some 25 to 50% less so the conventional and long draft systems of roving have applications in processing rayon. Spinning is very similar to that of cotton and only a few changes are necessary.

TREATING WOOL. Edwin P. Johnstone, Jr. and William J. van Loo, Jr. (to Am. Cyanamid Co.). USP Re 22 566/2 329 622, Nov. 21. The felting and shrinking tendencies of wool are lessened by impregnating clean wool with an aqueous dispersion of an unpolymerized, alkylated methylolmelamine condensation product followed by drying and heating at 200-300° F to polymerize the condensation product.

TEXTILE CHEMICALS

DESIZING AGENTS. L. C. Trayner. *Textile Bulletin 67,* No. 4, 28, 50 (1944). Use of enzymes for desizing fabrics in rayon and cotton finishing plants is explained in nontechnical terms. Penetrating agents must be nontoxic to enzymes, have good penetrating power at 110-140°F, and must be neutral products with good carrying, dispersing and penetrating value on enzymes.

GLYCERIN IN TEXTILES. W. J. Pickett. *Rayon Textile Monthly 25,* 563-4 (1944). Glycerin, because of its hygroscopicity, is superior to sulfonated oils as a lubricant in rayon warp sizing. There are many uses for glycerine, e. g. in spray dyeing and in manufacture of pigment white.

WATER REPELLENT FABRIC. Oscar E. Hamden (to Pond Lily Co.). USP 2 361 830, Oct. 31. Fabrics are rendered water-repellent by means of zirconium hydroxide and dispersed paraffin without the aid of metal soaps.

WETTING-OUT AGENT. Albert K. Epstein and Morris Katzman (to Emulsol Corp.). USP 2 362 894, Nov. 14. The major component of a wetting-out composition is a triethanolamine monocaprylate ester or a salt thereof, while the minor component is a partial ester of a fatty acid (6-18 C atoms) and glycerol or a glycol.

LOOM CONTROL. Richard G. Turner (to Crompton & Knowles Loom Works). USP 2 359 695, Oct. 3. A geared loom shaft operated with a brake handle has a pinion normally out of mesh with the gear and a hand wheel connected to the pinion in such a way that the pinion is meshed with the gear at the same time that the brake handle is released.

SHUTTLE DRIVE. David C. Churchill. USP 2 360 050, Oct. 10. A shuttle is driven from end to end of a loom race by receiving it at one side of the race with squeezing pressure, exerting force from opposite sides of the race obliquely to the shuttle and adjusting the force component so that the shuttle is expelled and driven across the race.

RUG. Willard T. Case (to Deltox Rug Co.). USP 2 360 398, Oct. 17. Pile fabric for rugs is made by running parallel loop stitches through a base fabric, crossing these with parallel rows of loop stitches, and running rows of tuft stitches between each pair of loop stitches in both directions.

WEFT REPLENISHING LOOM. Richard C. Turner (to Crompton & Knowles Loom Works). USP 2 360 529, Oct. 17. A weft detector is arranged to register with a shuttle box which rises with one pair and falls with the next pair of picks; the detector controls the actuator for a bobbin release device which is capable of operating during any pair of picks when the detector indicates weft exhaustion, but is so adjusted that weft exhaustion is not indicated during those pairs of picks when the shuttle box is falling.

SETTING AXMINSTER LOOMS. Russell C. Gebert and Robert J. Carson, Jr. (to Charles P. Cochrane Co.). USP 2 360 558, Oct. 17. A setting frame for Axminster looms has a reed, made of interchangeable sections, between the winder and the table supporting the yarn package spool; the reed arrangement permits free cross running of the yarn from different groups of spools to and through the interchanged sections of the reed during winding of a loom spool.

THREAD HOLDER. Herbert A. Whitin (to Crompton & Knowles Loom Works). USP 2 360 807, Oct. 17. A pivoted thread holder for weft replenishing looms is actuated by vibration during loom operation in such a way that motion in one direction is caused by vibration while the return motion is caused by gravity.

WEFT DETECTOR. Clifford Darwin (to Crompton & Knowles Loom Works). USP 2 360 852, Oct. 24. A weft detector for weft replenishing looms is mounted in front of the shuttle boxes which rise and fall in a 4-pick cycle; it is connected to the control device in such a way that weft replenishment recurs during the 2nd pick of this cycle, the actuator having a 2-pick cycle operating on the 1st and 3rd picks of the other cycle.

STOP MOTION. Kenneth V. McCaleb (to United Merchants & Mfrs., Inc.). USP 2 361 145, Oct. 24. A double lift double cylinder Jacquard loom having alternately acting odd and even pattern cards has a stopping device with 2 switches in series, one being controlled by certain cards of the odd card series and the other by a certain card of the even card series, in such a way that each controlling card is followed by at least 1 card which does not control the stop motion switch.

RESIDENCE AT BOXWOOD

This building, the residence on the recently purchased property, will be occupied by the Institute of Textile Technology in January, 1945. In the final plan it will be the Administration Building. A sketch of the plan for other buildings will be published in a forthcoming issue.